



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,169	06/29/2001	Kevin J. Rogers	7004	7427

7590 07/14/2004

Kathryn W. Grant
The Babcock & Wilcox Company
Patent Dept.
20 S. Van Buren Avenue
Barberton, OH 44203

EXAMINER

MC Henry, Kevin L

ART UNIT	PAPER NUMBER
----------	--------------

1725

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/896,169

Applicant(s)

ROGERS ET AL.

Examiner

Kevin L McHenry

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/1/01.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 9, and 11-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over “2200 MW SCR Installation on New Coal-Fired Project” in view of Schoubye (U.S.P. 6,074,619).

The first reference teaches a flue for a selective catalytic reduction reactor that has an inlet end, an outlet end, and an injection grid for supplying ammonia into a gas flow within the flue. The flue has a perforated plate, flow splitter tabs, and a flow straightener. This reference teaches that flue gas flow and NO_x are measured near the inlet of the catalyst and that this measurement is used to control a valve regulating ammonia flow. (See “2200 MW SCR Installation on New Coal-Fired Project”; p. 3-4; Figure 3).

“2200 MW SCR Installation on New Coal-Fired Project” does not teach that the flue has vanes for dividing gas flow into two or more separate flow channels that end near the reduction reactor.

Schoubye teaches a flue for a selective catalytic reduction reactor that includes vanes for dividing gas flow into two or more separate flow channels that end near the reduction reactor. Schoubye teach that this arrangement with vanes allows one to spray

larger reductant droplet sizes. (See U.S.P. 6,074,619; column 1, lines 10-16, 62-67; column 2, lines 3-19).

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the flue of "2200 MW SCR Installation on New Coal-Fired Project" by the teachings of Schoubye. One would have been motivated to do so in order to allow the spray of larger reductant droplets, as taught by Schoubye.

3. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over "2200 MW SCR Installation on New Coal-Fired Project" in view of Schoubye (U.S.P. 6,074,619) as applied to claims 1-7, 9, and 11-17 above, and further in view of Gallagher et al. (U.S.P. 5,529,093).

The former references teach the flue noted above in section 2. However, these references do not teach the use of a tube bundle.

Gallagher et al. teach a tube bundle that isolates flow meters from disturbances and allows more accurate metering of fluids in pipelines. (See U.S.P. 5,529,093; column 5, lines 31-39).

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the flue noted above by the teachings of Gallagher et al. One would have been motivated to do so in order to provide a means that minimizes disturbances in flow and allows more accurate metering of fluids in pipelines, as taught by Gallagher et al.

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over “2200 MW SCR Installation on New Coal-Fired Project” in view of Schoubye (U.S.P. 6,074,619) as applied to claims 1-7, 9, and 11-17 above, and further in view of Daw et al. (U.S.P. 5,435,972).

The former references teach the flue noted above in section 2. However, these references do not teach the use of pressure taps.

Daw et al. teaches an apparatus that includes a pressure transducer that is mounted in a pressure tap. (See U.S.P. 5,435,972; column 3, lines 52-58).

It would have been obvious to one of ordinary skill in the art at the time that the applicant's invention was made to have modified the flue described above by the teachings of Daw et al. One would have been motivated to use pressure taps as a means for mounting sensors in the flue, as taught by Daw et al.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Goldschmidt et al. (U.S.P. 3,880,597) and Chu et al. (U.S.P. 5,540,897) are cited of interest for illustrating the state of the art in flues.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin L McHenry whose telephone number is (571) 272-1181. The examiner can normally be reached on M-F.

Art Unit: 1725

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin McHenry

Kiley Stoner AU 1725

Kiley Stoner 7/12/04